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Indian Standard

METHODS FOR SPLICING OF WIRE ROPES

**PART II WIRE ROPE SLING LEGS WITH
FERRULE-SECURED EYE TERMINALS**

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Indian Standard

METHODS FOR SPLICING OF WIRE ROPES

PART II WIRE ROPE SLING LEGS WITH FERRULE-SECURED EYE TERMINALS

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Indian Standard

METHODS FOR SPLICING OF WIRE ROPES

PART II WIRE ROPE SLING LEGS WITH FERRULE-SECURED EYE TERMINALS

0. FOREWORD

0.1 This Indian Standard (Part II) was adopted by the Indian Standards Institution on 4 August 1971, after the draft finalized by the Wire Ropes and Wire Products Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 The Part I of this standard covers different types of hand splicings, methods of hand splicings and tools for splicing. This part provides an alternative form of the single-part wire rope sling legs specified in IS:2762-1964*. The eye terminal is formed by looping the rope back parallel to the main part and joining the parts by means of a ferrule under pressure, instead of splicing.

0.3 There are two methods of forming such an eye terminal. The two parts of rope may be placed side by side prior to pressing the ferrule. Alternatively the strands at the end of the rope may be unlaid and re-laid over the main part prior to the pressing operation.

0.4 Any new lifting tackle device has to overcome a natural prejudice in favour of known and tried methods, since the failure of any component of lifting tackle can be serious. Correctly made, they are of greater strength than conventional hand-tucked spliced terminal eyes, with the advantage that they are prepared in a shorter time and by less skilled labour.

0.5 The security of the eye terminal is controlled by initial prototype acceptance testing, and secondly by routine testing. It is a requirement of this standard that the ferrule be of a type which has passed the prototype tests.

0.6 In the preparation of this standard considerable assistance has been derived from BS 3865-1965 'Wire rope sling legs with ferrule-secured eye terminals' issued by British Standards Institution.

*Specification for wire rope slings and sling legs.

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0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS: 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard (Part II) covers the requirements for wire rope sling legs made from wire ropes of the following constructions:

- 6 × 7 Group
- 6 × 19 Group
- 6 × 24 Group
- 6 × 37 Group
- 7 × 7 Group
- 7 × 19 Group

The sling legs are terminated by ferrule-secured eyes, with or without thimbles or other fittings as specified by the purchaser.

1.2 Prototype tests covering the initial acceptance of the process and routine tests are specified.

2. TERMINOLOGY

2.0 For the purpose of this standard, the definitions as given in IS: 2363-1965† in addition to the following shall apply.

2.1 Ferrule-Secure Eye Terminal—A wire rope eye terminal made by looping the rope bank parallel to the main part, and securing the two parts at the throat of the eye by means of a metallic ferrule (or ferrules), subjected to radial pressure to form the joint.

2.2 Swaged Fittings—Fittings in which wire rope is inserted and attached by cold-flowing method.

3. MATERIAL

3.1 Wire Rope—The wire rope shall comply with IS: 2266-1970‡, or with IS: 3459-1966§ and shall be one of the following constructions:

*Rules for rounding off numerical values (*revised*).

†Glossary of terms relating to wire ropes.

‡Specification for steel wire ropes for general engineering purposes (*first revision*).

§Specification for small wire ropes.

| <i>Designation</i> | <i>Construction of Strand</i> |
|--------------------|----------------------------------------------------------------------------------------------------------------|
| 6 × 7 | 6/1 |
| 6 × 19 Group | a) 12/6/1 b) 12/6 + 6F/1 |
| 6 × 24 | 15/9/Fibre |
| 6 × 37 Group | a) 14/7 and 7/7/1 b) 14/7 + 7F/7/1 c) 15/15/6/1 d) 16/8 and 8/8/1 e) 16/8 + 8F/6/1 f) 18/12/6/1 |
| 7 × 7 | 6/1 |
| 7 × 19 | 12/6/1 |

NOTE — For sling legs up to about 20 mm diameter, a rope in the 6 × 19 Group will generally provide sufficient flexibility and will offer good wearing properties. For larger sizes one of the 6 × 37 Group is generally preferred on account of its increased flexibility. Ropes of 6 × 24 construction possess flexibility and individual wire sizes intermediate between those of 6 × 19 and 6 × 37 Groups.

3.2 Ferrule

3.2.1 Type of Ferrule — The maker or supplier of any particular type of ferrule shall demonstrate to the purchaser or his representative that the eye terminal secured with the ferrule is capable of performing its duties satisfactorily and consistently, that eye terminals made with ferrules identical in all respects including dimensions have passed the prototype tensile test to destruction described in 7.2, and that eye terminals made with ferrules of the same type (though not necessarily of the same dimensions) have passed the prototype durability test by pulsatory loading (endurance test) of 7.3. He shall state in details the essential requirements that should be met during usage and assembly to ensure a satisfactory ferrule-secured eye terminal.

Should there be any conditions of usage for which the assembly is unsuitable, for example working temperature, adverse effect of rope spin, bending, etc, this shall be stated to the purchaser or his representative.

3.2.2 Size of Ferrule — The ferrule size designation is determined by the type of the rope being used for the purpose and is normally the nominal diameter of the wire rope for which it is intended. The manufacturers providing their own code number shall specify the range and type suitable for each code size.

3.2.3 Material of Ferrule — The maker shall specify the material from which the ferrule is made. The hardness of the ferrule material shall be

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not less than 40 HB (see IS:1790-1961*). This requirement may however be waived provided the manufacturer can prove to the satisfaction of the purchaser or his representative that no deleterious effect will result from the use of softer material.

Should different material be required for any purpose, the ferrule made of such material shall be treated as a new project, and shall be subjected to fresh prototype tests.

3.2.4 Workmanship—The ferrule shall be free from defects. It shall be examined by a competent person before assembly. The wire rope shall normally protrude by half the diameter of the wire rope so as to ensure proper swaging.

3.3 Thimble—When thimbles are used they shall comply with the requirements of IS:2315-1963†. A larger size of thimble may be used if found necessary, for example to accept the eye of a corresponding shackle.

4. PERMISSIBLE WORKING LOAD

4.1 For normal conditions of service the permissible working load shall not exceed one-sixth of the minimum breaking load given in Table 1.

5. PROOF LOADING

5.1 The completed sling leg shall be proof-loaded to twice the permissible working load (see 4).

5.1.1 The proof-loading shall be accurate to within $\pm\frac{0}{5}$ percent of applied load.

5.2 Inspection—Each sling leg shall be inspected by a competent person prior to assembly and also after proof-loading. It complies only if free from visible flaws or defects.

6. DESIGNATION

6.1 Wire rope sling legs with ferrule-secured eye terminals shall be designated by the size and construction of wire rope, permissible working load and the number of this standard.

Example:

A wire rope sling legs with ferrule-secured eye terminals for a wire rope of diameter 10 mm and 6 × 19 construction with a permissible working load of 8.1 kN shall be designated as:

Ferrule-Secured Eye Terminal 10, 6 × 19, **8.1 IS:5245 (Part II)**

*Method for Brinell hardness test for light metals and their alloys.

†Specification for thimbles for wire ropes.

TABLE 1 MINIMUM BREAKING AND PERMISSIBLE WORKING LOAD OF FERRULE-SECURED EYE TERMINALS

(Clauses 4.1, 7.2, 7.3.2.1, 7.3.2.2 and 8.1)

| DIAMETER OF WIRE ROPE | MINIMUM BREAKING LOAD | | | | | | | | | | PERMISSIBLE BREAKING LOAD | | | | | | | | | | | | | | | |
|-----------------------------|-----------------------|----------|--------|-----------|--------|-----------|--------|-----------|-------|----------|---------------------------|-----------|-------|----------|--------|----------|--------|----------|--------|----------|-------|----------|--------|----------|----|-------|
| | 6 × 7 | | 6 × 19 | | 6 × 24 | | 6 × 37 | | 7 × 7 | | 7 × 19 | | 6 × 7 | | 6 × 19 | | 6 × 24 | | 6 × 37 | | 7 × 7 | | 7 × 19 | | | |
| | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) | kN | (kgf) |
| 4 | — | — | 7.8 | (795) | 6.4 | (650) | — | — | — | — | — | — | — | — | 1.3 | (132) | 1.0 | (108) | — | — | — | — | — | — | — | — |
| 5 | — | — | 12.2 | (1 240) | 9.9 | (1 010) | — | — | — | — | — | — | — | — | 2.3 | (206) | 1.6 | (168) | — | — | — | — | — | — | — | — |
| 6 | — | — | 17.6 | (1 790) | 14.2 | (1 450) | 16.9 | (1 720) | — | — | — | — | — | — | 2.9 | (298) | 2.3 | (241) | 2.8 | (286) | — | — | — | — | — | — |
| 7 | — | — | 23.9 | (2 440) | 19.4 | (1 980) | 23.0 | (2 340) | — | — | — | — | — | — | 4.0 | (406) | 3.2 | (330) | 3.8 | (390) | — | — | — | — | — | — |
| 8 | 30.9 | (3 150) | 31.2 | (3 180) | 25.3 | (2 580) | 30.0 | (3 060) | — | — | — | — | 5.1 | (525) | 5.2 | (530) | 4.2 | (430) | 5.0 | (510) | — | — | — | — | — | — |
| 9 | 38.7 | (3 950) | 39.6 | (4 040) | 32.1 | (3 270) | 38.0 | (3 870) | — | — | — | — | 6.4 | (660) | 6.6 | (673) | 5.3 | (545) | 6.3 | (645) | — | — | — | — | — | — |
| 10 | 47.1 | (4 800) | 48.8 | (4 870) | 39.6 | (4 040) | 46.9 | (4 780) | 52.0 | (5 300) | — | — | 7.8 | (800) | 8.1 | (829) | 6.6 | (673) | 7.8 | (796) | 8.6 | (883) | — | — | — | — |
| 11 | 56.9 | (5 800) | 59.1 | (6 020) | 47.8 | (4 870) | 56.6 | (5 770) | 62.8 | (6 400) | — | — | 9.5 | (966) | 9.8 | (1 003) | 7.9 | (811) | 9.4 | (961) | 10.4 | (1 066) | — | — | — | — |
| 12 | 72.6 | (7 400) | 70.4 | (7 180) | 56.9 | (5 800) | 61.3 | (6 860) | 80.4 | (8 200) | — | — | 12.1 | (1 233) | 11.7 | (1 196) | 9.5 | (966) | 10.2 | (1 143) | 13.4 | (1 366) | — | — | — | — |
| 13 | — | — | 82.4 | (8 440) | 66.9 | (6 820) | 79.3 | (8 080) | — | — | — | — | — | — | 13.9 | (1 400) | 11.1 | (1 136) | 13.2 | (1 346) | — | — | — | — | — | — |
| 14 | 96.1 | (9 800) | 95.2 | (9 700) | 77.5 | (7 900) | 91.7 | (9 350) | 107 | (10 900) | 102 | (10 350) | 16.0 | (1 633) | 15.8 | (1 616) | 12.9 | (1 316) | 15.3 | (1 558) | 17.8 | (1 816) | 17.0 | (1 725) | — | — |
| 16 | 124 | (12 600) | 126 | (12 800) | 102 | (10 400) | 120 | (12 200) | 137 | (14 000) | 138 | (14 100) | 20.6 | (2 100) | 21.0 | (2 133) | 17.0 | (1 733) | 20.0 | (2 033) | 22.8 | (2 333) | 23.0 | (2 350) | — | — |
| 18 | 154 | (15 700) | 158 | (16 100) | 128 | (13 000) | 152 | (15 500) | 172 | (17 500) | 166 | (16 900) | 25.6 | (2 617) | 26.3 | (2 683) | 21.3 | (2 166) | 25.3 | (2 583) | 28.6 | (2 933) | 27.6 | (2 816) | — | — |
| 20 | 198 | (20 200) | 195 | (19 900) | 158 | (16 100) | 187 | (19 100) | 220 | (22 400) | 212 | (21 600) | 33.0 | (3 366) | 32.5 | (3 316) | 26.3 | (2 683) | 31.1 | (3 183) | 36.6 | (3 733) | 35.3 | (3 600) | — | — |
| 22 | 236 | (24 100) | 236 | (24 100) | 191 | (19 500) | 227 | (23 100) | 263 | (26 800) | 245 | (25 000) | 39.3 | (4 016) | 39.3 | (4 016) | 31.8 | (3 250) | 37.8 | (3 850) | 43.8 | (4 466) | 40.8 | (4 166) | — | — |
| 24 | 279 | (28 400) | 282 | (28 700) | 228 | (23 200) | 271 | (27 600) | 309 | (31 500) | 289 | (29 500) | 46.5 | (4 733) | 47.0 | (4 783) | 38.0 | (3 866) | 45.1 | (4 600) | 51.5 | (5 200) | 48.1 | (4 916) | — | — |
| 26 | 324 | (33 000) | 330 | (33 600) | 267 | (27 200) | 317 | (32 300) | 360 | (36 700) | 362 | (36 900) | 54.0 | (5 500) | 55.0 | (5 600) | 44.5 | (4 533) | 52.8 | (5 366) | 60.0 | (6 116) | 63.3 | (6 150) | — | — |
| 28 | 386 | (39 300) | 383 | (39 000) | 311 | (31 600) | 367 | (37 400) | 428 | (43 600) | 406 | (41 400) | 64.3 | (6 550) | 63.8 | (6 500) | 51.8 | (5 266) | 61.1 | (6 233) | 71.3 | (7 266) | 67.6 | (6 900) | — | — |
| 32 | 494 | (50 400) | 500 | (51 000) | 405 | (41 300) | 481 | (49 000) | 549 | (56 000) | 527 | (53 700) | 82.3 | (8 400) | 83.3 | (8 500) | 67.5 | (6 883) | 80.1 | (8 166) | 91.5 | (9 333) | 87.8 | (8 950) | — | — |
| 36 | 635 | (64 700) | 633 | (64 500) | 575 | (52 500) | 608 | (62 000) | 704 | (71 800) | 663 | (67 600) | 106 | (10 783) | 105 | (10 750) | 85.8 | (8 750) | 101 | (10 333) | 117 | (11 966) | 110 | (11 266) | — | — |
| 40 | 774 | (78 900) | 781 | (79 600) | 634 | (64 600) | 749 | (76 400) | — | — | 848 | (86 400) | 129 | (13 100) | 130 | (13 266) | 105 | (10 766) | 125 | (12 733) | — | — | 141 | (14 400) | — | — |
| 44 | — | — | 905 | (92 300) | 806 | (82 200) | 982 | (100 100) | — | — | 1 018 | (103 800) | — | — | 151 | (15 383) | 134 | (13 700) | 163 | (16 683) | — | — | 169 | (17 300) | — | — |
| 48 | — | — | 1 085 | (110 600) | 983 | (100 200) | 1 184 | (120 700) | — | — | 1 204 | (122 700) | — | — | 181 | (18 433) | 164 | (16 700) | 197 | (20 116) | — | — | 200 | (20 450) | — | — |
| 52 | — | — | 1 252 | (127 600) | 1 137 | (115 900) | 1 345 | (137 100) | — | — | 1 408 | (143 500) | — | — | 208 | (21 266) | 189 | (19 316) | 224 | (22 850) | — | — | 234 | (23 916) | — | — |
| 56 | — | — | 1 447 | (147 500) | 1 302 | (132 700) | 1 578 | (160 900) | — | — | 1 626 | (165 700) | — | — | 241 | (24 583) | 217 | (22 116) | 263 | (26 816) | — | — | 271 | (27 616) | — | — |
| 60 | — | — | — | — | — | — | — | — | — | — | 1 858 | (189 400) | — | — | — | — | — | — | — | — | — | — | 309 | (31 566) | — | — |

NOTE 1 — The values in this table are applicable to the tensile strength of the ferrule-secured eye terminals and not to that of the wire rope.

NOTE 2 — Permissible working load values are calculated taking a factor of safety of six. Higher factor of safety can be taken according to type of loading.

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7. ACCEPTANCE PROTOTYPE TESTS

7.1 Prototype Tests — Eye terminals made with each type of ferrule shall be subjected to the prototype tests specified in 7.2 and 7.3.

Subsequent to these tests, all ferrules shall be examined for cracks and for indications of the wire 'pulling out'. If cracks or other defects are found, sling legs made with the particular type of ferrule under consideration shall be deemed not to comply with this standard. This type of ferrule may, however, be re-submitted for prototype testing accompanied by a detailed report from the makers, explaining why the defects occurred and what measures have been taken to avoid such failures in future.

7.2 Prototype Breaking Load Test to Destruction — Two sling legs with ferrule-secured eye terminals made with each size of each construction, except for 6×24 construction in sizes 26 mm and above (which are not in general supply), the strand formation being optional, shall be subjected to a prototype breaking load test in accordance with Table 1.

There shall be at least 1 m of clear rope between the ferrules, and the load shall be so applied to the ferrule-secured eye terminals that the eye shape is not significantly collapsed or distorted.

Not more than four-fifth of the minimum breaking load may be applied quickly. Thereafter the load shall be applied slowly and steadily until the actual load is attained.

The accuracy of the testing machine shall be in accordance with IS: 1828-1961*.

7.3 Prototype Durability Test by Pulsatory Loading (Endurance Test)

7.3.1 Two sling legs in each of the three representative sizes of a rope of particular construction shall be subjected to the endurance test. The three rope sizes shall be respectively the largest, the smallest and an intermediate size near the middle of the range covered by the particular process.

7.3.2 The six samples shall than be subjected to one of the following endurance tests by pulsatory loading. Each test shall be performed in one continuous run without interruption. For compliance with this standard the sling leg shall withstand not less than 75 000 cycles of either test, at the conclusion of which there shall be no broken wires.

*Method for load calibration of testing machines for tensile testing of steel.

7.3.2.1 First alternative test— Each sling leg shall be subjected to a cyclical tension varying from no load to twice of the permissible working load value given in Table 1 for all the three constructions, at a frequency of 20 cycles per minute with a tolerance of ± 10 percent. The loading phase of each cycle shall be smooth. The sling leg shall not sag or flex at no load in such a manner as would result in a jerk when the load is applied again (see Fig. 1).

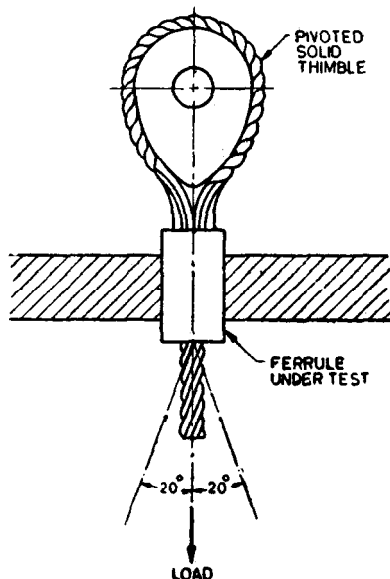


FIG. 1 DURABILITY BENDING TEST

7.3.2.2 Second alternative test— (For use when a fatigue tensile testing machine is available.) Each sling leg shall be subjected to a cyclical tension varying between the permissible working load values given in Table 1 to twice of these values for all the three constructions, with the machine set at a frequency not exceeding 250 cycles per minute. The machine shall be of a type that applies a cyclical tension along the rope axis, producing the same stress pattern at both the fixed and moving anchorages with a maximum frequency variation of ± 3.5 percent.

7.3.3 For compliance with this standard, the ferrule-secured eye terminal shall outlast the hand-spliced eye terminal. The method for hand splicing of wire ropes is laid down in IS: 5245 (Part I)-1969*.

*Methods for splicing of wire ropes: Part I Hand splicing of wire ropes.

8. ROUTINE TESTING OF SAMPLES OF COMPLETED SLINGS

8.1 Routine Tensile Testing— Unless otherwise agreed between purchaser and manufacturer, samples of completed slings shall be subjected to the permissible working load given in Table 1, and the ferrule-secured eye shall not break at less than the six times the values specified therein. (This test applies only to the ferrule-secured eye terminal, and not to the wire rope).

8.2 Routine Check of Dimensions of Completed Ferrule— When agreed with the purchaser or his representative, ferrule-secured eye terminal shall be made under observation, with the same size and construction of wire rope and the correct ferrule. The diameters of the ferrules of the samples and of the ferrule-secured eye terminal shall not differ by more than ± 2 percent. The lengths of the ferrules shall not differ by more than ± 5 percent. The ferrule shall be free from visible flaws or defects.

9. CERTIFICATE OF TEST

9.1 With each sling fitted with ferrule-secured eye terminals, the manufacturer shall supply a certificate of test. The form of the certificate should be as indicated in Appendix A.

10. MARKING

10.1 The order number of the purchaser and any other marking which may be specified by the purchaser shall be legibly stamped upon a tag securely attached to each sling legs having ferrule-secured eye terminals, alternatively the marking may be in the ferrule-secured eye terminal by punching figures and relevant date on the complete ferrule.

NOTE— The punching should not be too deep to weaken the ferrule.

10.1.1 The sling legs may also be marked with the Standard Mark.

10.1.2 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

11. PACKING

11.1 Sling legs having ferrule-secured eye terminals shall be suitably protected to avoid damage in transit.

APPENDIX A
(Clause 9.1)

PRO FORMA FOR CERTIFICATE OF TEST

- Test Certificate No.
- 1) Name and address of maker or supplier of sling legs having ferrule-secured eye terminals
 - 2) a) Diameter of rope
 - b) Construction
 - 3) a) Date of test of sample of sling legs having ferrule-secured eye terminals
 - b) Load at which sample broke
 - 4) Name and address of public service, association, company or firm making the test and examination
 - 5) Name and position of signatory in public service, association, company or firm making the test and examination.....

I certify that each sling:

Includes ferrule-secured eye terminal representative of those that have been subjected to the acceptance prototype test specified in clauses 7.2 and 7.3 of IS : 5245 (Part II)-1971 and found satisfactory.

Has met the proof-loading requirements specified in clause 5.1 of IS : 5245 (Part II)-1971.

Has been inspected in accordance with clause 5.2 of IS : 5245 (Part II)-1971.

Above particulars are correct and that the test and examination were carried by me.

.....
Signature of the Competent Person
Date

(Continued from page 2)

| <i>Members</i> | <i>Representing</i> |
|------------------------------------------|---------------------------------------------------|
| SHRI I. LAKHANI | Usha Martin Black (Wire Ropes) Ltd, Calcutta |
| SHRI V. C. MISRA (<i>Alternate</i>) | |
| MAJ G. L. MANWANI | Ministry of Defence (R & D) |
| SHRI R. B. SINGH (<i>Alternate</i>) | |
| SHRI AJAYA MOBILEY | J. K. Steel & Industries Ltd, Calcutta |
| SHRI K. S. BHARGAWA (<i>Alternate</i>) | |
| SHRI P. D. NATH | Central Mining Research Station (CSIR), Dhanbad |
| SHRI P. R. ROY (<i>Alternate</i>) | |
| SHRI R. P. WANKADIA | Scindia Workshop Ltd, Bombay |
| SHRI T. A. SHAIKH (<i>Alternate</i>) | |

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| Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002 | 5 36 27 |
| Kalai Kathir Building, 6/48-A Avanasai Road, COIMBATORE 641037 | 2 67 05 |
| Quality Marking Centre, N.H. IV, N.I.T., FARIDABAD 121001 | — |
| Savitri Complex, 116 G. T. Road, GHAZIABAD 201001 | 8-71 19 96 |
| 53/5 Ward No. 29, R.G. Barua Road, 5th By-lane, GUWAHATI 781003 | 3 31 77 |
| 5-8-56C L. N. Gupta Marg. (Nampally Station Road) HYDERABAD 500001 | 23 10 83 |
| R14 Yudhister Marg, C Scheme, JAIPUR 302005 | 6 34 71 |
| 117/418 B Sarvodaya Nagar, KANPUR 208005 | 21 68 76 |
| Plot No. A-9, House No. 561/63, Sindhu Nagar, Kanpur Road LUCKNOW 226005 | 5 55 07 |
| Patliputra Industrial Estate, PATNA 800013 | 6 20 05 |
| District Industries Centre Complex, Bagh-e-Ali Maidan, SRINAGAR 190011 | — |
| T. C. No. 14/1421, University P. O., Palayam, THIRUVANANTHAPURAM 695034 | 6 21 04 |
| <i>Inspection Offices (With Sale Point) :</i> | |
| Pushpanjali, First Floor, 205-A West High Court Road, Shankar Nagar Square, NAGPUR 440010 | 52 51 71 |
| Institution of Engineers (India) Building, 1332 Shivaji Nagar, PUNE 411005 | 5 24 35 |
| *Sales Office Calcutta is at 5 Chowringhee Approach, P. O. Princep Street, CALCUTTA | 27 68 00 |
| † Sales Office is at Novelty Chambers, Grant Road, BOMBAY | 89 65 28 |
| ‡ Sales Office is at Unity Building, Narasimharaja Square, BANGALORE | 22 39 71 |

AMENDMENT NO. 1 SEPTEMBER 1980
TO
IS : 5245 (Part II)-1971 METHODS FOR
SPLICING OF WIRE ROPES

PART II WIRE ROPE SLING LEGS WITH
FERRULE-SECURED EYE TERMINALS

Alteration

(*Page 11, clauses 9 and 9.1*) — Substitute the following for the existing clauses:

'9. CERTIFICATES OF TEST

9.1 With each sling fitted with ferrule secured eye terminals, the manufacturer shall supply certificates of test. The forms of the certificates should be as indicated in Appendices A and B.'

Addendum

(*Page 12, Appendix A*) — Add the following new appendix after Appendix A:

A P P E N D I X B

(*Clause 9.1*)

PROFORMA FOR THE PROOF LOADING
CERTIFICATE OF TEST

Test Certificate No.....

- 1) Name and address of maker or supplier of sling legs having ferrule-secured eye terminals.....
- 2) a) Diameter of rope.....
b) Construction.....
- 3) a) Description of the sling (State whether single sling or multiple sling).....
b) Distinguishing No. or mark.....
c) Date of test.....
d) Proof load applied.....
e) Safe working load (Indicate maximum permissible angle between legs in the case of multiple sling).....

- 4) Name and address of public service, association, company or firm making the test and examination.....
.....
- 5) Name and position of signatory in public service, association, company or firm making the test and examination.....
.....

I certify that each sling:

Has met the proof-loading requirements specified in clause 5.1 of IS : 5245 (Part II)-1971.

Has been inspected in accordance with clause 5.2 of IS : 5245 (Part II)-1971.

Above particulars are correct and that the test and examination were carried by me.

.....
Signature of the Competent Person

Date.....

AMENDMENT NO. 2 JANUARY 1984

TO

IS:5245(Part 2)-1971 METHODS FOR SPLICING OF WIRE ROPES
PART 2 WIRE ROPE SLING LEGS WITH FERRULE-
 SECURED EYE TERMINALS

Corrigendum

(Page 7, Table 1, col heading) - Substitute
'PERMISSIBLE WORKING LOAD' for 'PERMISSIBLE BREAKING
LOAD'.

(EDC 32)

Reprography Unit, BIS, New Delhi, India